



The FSA Solution Life Cycle

It's like building your dream house...



Plan It!

Vision



Design It!

Definition



Build It!

Construction



Move In!

Deployment



Maintain It!

Support & Retirement



Learning Objectives

- ◆ Understand the SLC's Purpose
- ◆ Understand the Roles identified in the SLC
- ◆ I identify and Define the SLC's Five Phases
- ◆ I identify the Workproducts Recommended by the SLC

What is a Solution Life Cycle?

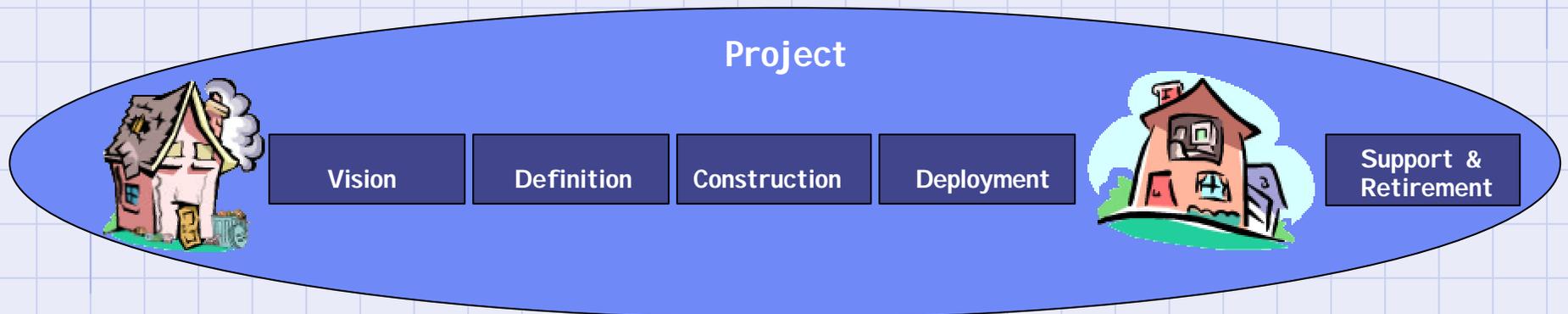


- ◆ A solution is an answer to a business need.
- ◆ A life cycle guides a solution from beginning to end.
- ◆ FSA's Solution Life Cycle (SLC) is a framework containing a set of defined, documented and practiced processes that guide a solution from beginning to end.



What is the FSA SLC?

The SLC is a framework for completing a solution.



This framework is supported by additional information.



Process Guides



Job Aids/Samples



Roles

Who needs the SLC?

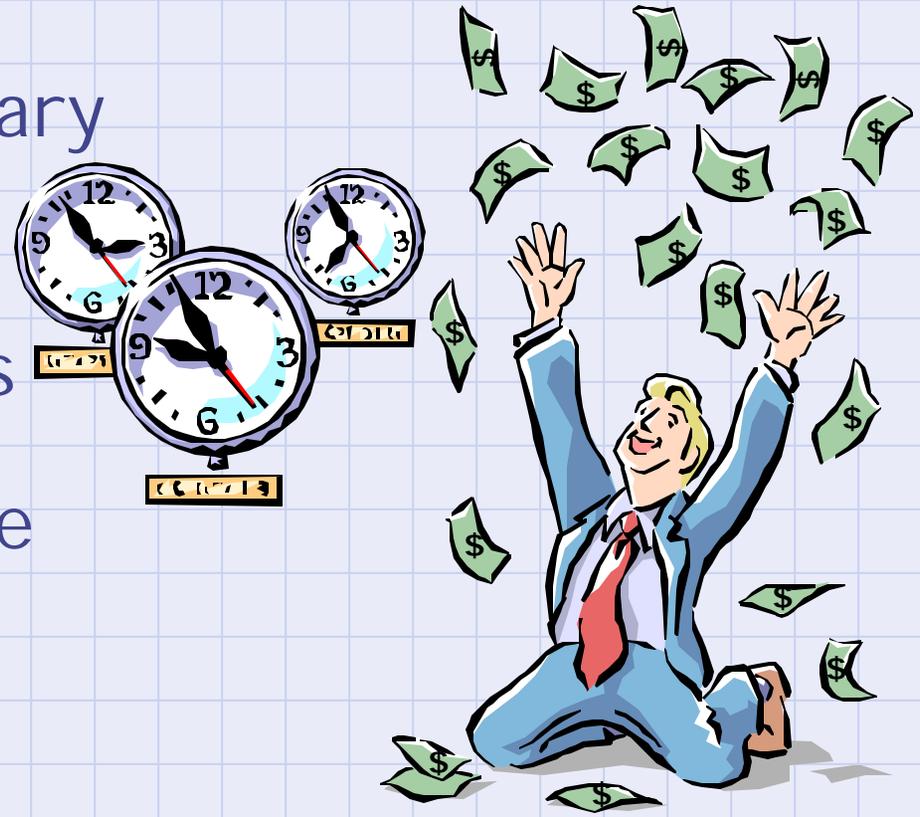


- ◆ Anyone who participates in or manages the acquisition of a solution for FSA
 - These Roles include:
 - ◆ FSA Project Managers
 - ◆ Subject Matter Experts (SMEs)
 - ◆ Members of an Integrated Product Team (IPT)
 - ◆ CIO Participants
 - ◆ Operating Partners
 - ◆ Executive Sponsor



How do you benefit?

- ◆ Reduces Time and Effort
- ◆ Eliminates Unnecessary Rework
- ◆ Enables Cost Savings
- ◆ Gets Everyone on the Same Page



How does the SLC work?



Phase 1: Vision



Plan It!

Phase 2: Definition

Design It!



Phase 3: Construction



Build It!

Phase 4: Deployment

Move In!



Phase 5: Support & Retirement



Maintain It!

The Solution Life Cycle



Solution Acquisition Planning (SAP)

Solution Acquisition Project Management (SAPM)

Requirements Development and Management (RDM)

Transition to Support (TTS)

Phases

Vision	Definition	Construction	Deployment	Support & Retirement
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Results

Problem Assessment	System Requirements	Detailed Design	Deployed Solution	Production Services
Solution Recommendation	Preliminary Design	Accepted Solution		

Quality Assurance (QA)

Configuration Management (CM)

System Security (SS)

The SLC is ...



- ◆ FSA's guide to acquiring a solution
- ◆ A framework that provides
 - **A Repeatable Process**
 - **A Common Language**
 - **An Efficient Solution**

The Vision Phase



Plan It!

Plan It!



Phase 1: Vision

- ◆ The Purpose of the Vision Phase is to:
 - Conduct an assessment of the business problem
 - Provide a Solution Recommendation

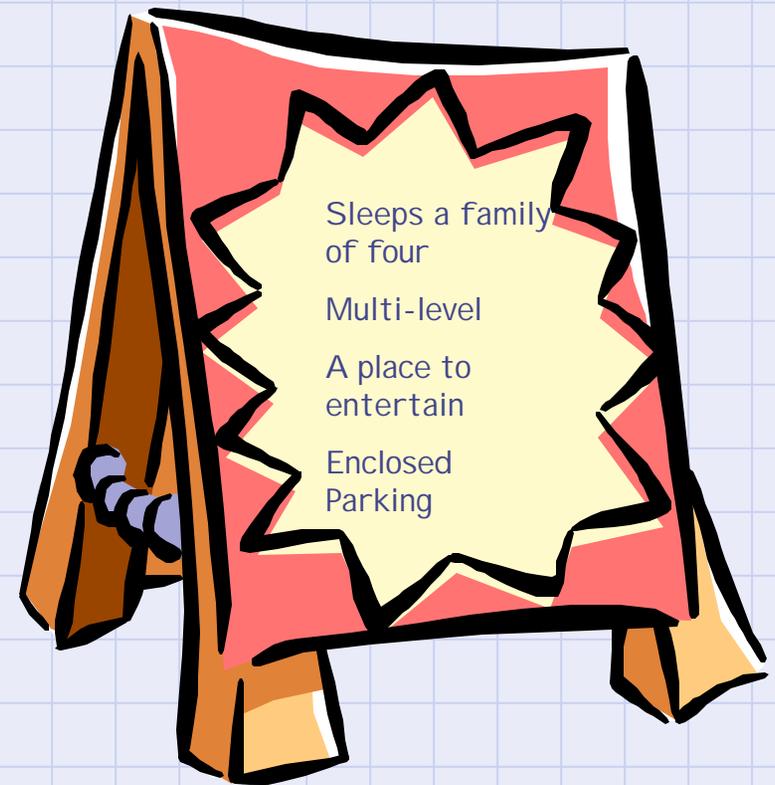


Plan It!



Phase 1: Vision

- ◆ Define High Level Requirements
- ◆ What are High Level Requirements?
 - The basic “facts” our business case needs to address
 - These requirements will be translated into “testable” low level requirements during the Definition phase
- ◆ What’s available to help me?
 - The Requirements Development and Management Process Guide



Plan It!



Phase 1: Vision

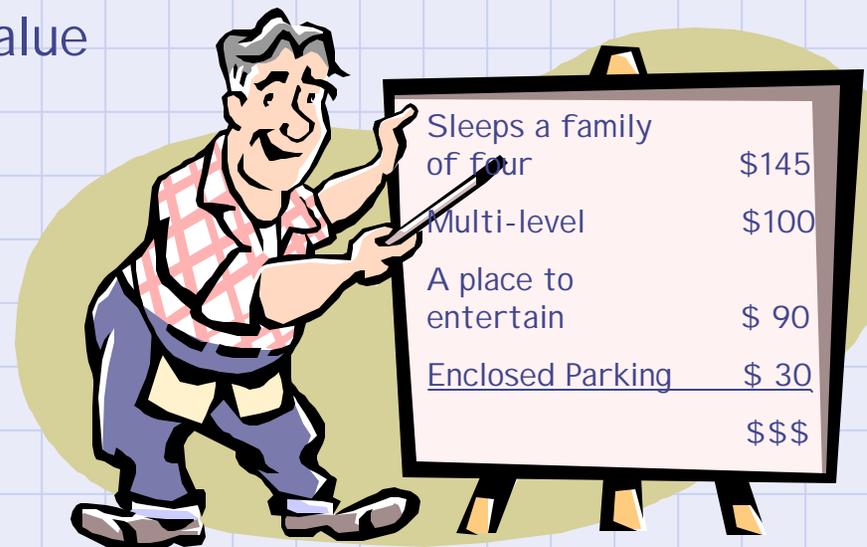
◆ Build a Business Case

◆ What should a Business Case contain?

- The business need
- The projected costs and value
- Clearly identified scope
- Benefits and Risks
- Technologies Used
- DSG Review and IRB Approval

◆ What's available to help me?

- A Business Case Template
- Business Case Estimating Tool
- Solution Acquisition Planning Process Guide

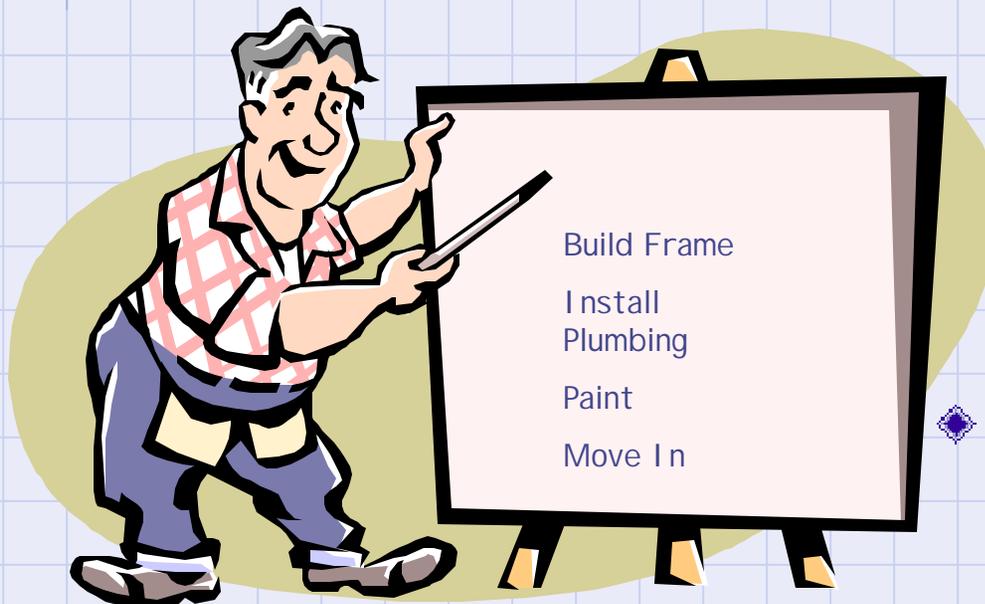


Plan It!



Phase 1: Vision

- ◆ Build a Statement of Objectives (SoO) and a Task Order (TO)
 - ◆ What is the purpose of the SoO and TO?
 - Give background of solution
 - Objectives of the solution
 - Government provided resources
 - Outputs of deliverables
 - Timeframe
 - ◆ What's available to help me?
 - SoO Sample
 - TO Sample



Plan It!



Phase 1: Vision

◆ Form an IPT (Integrated Product Team)

◆ An IPT:

- Is comprised of different team members from different organizations
- Brings together the right skills to complete the solution
- Reports to the Executive Sponsor



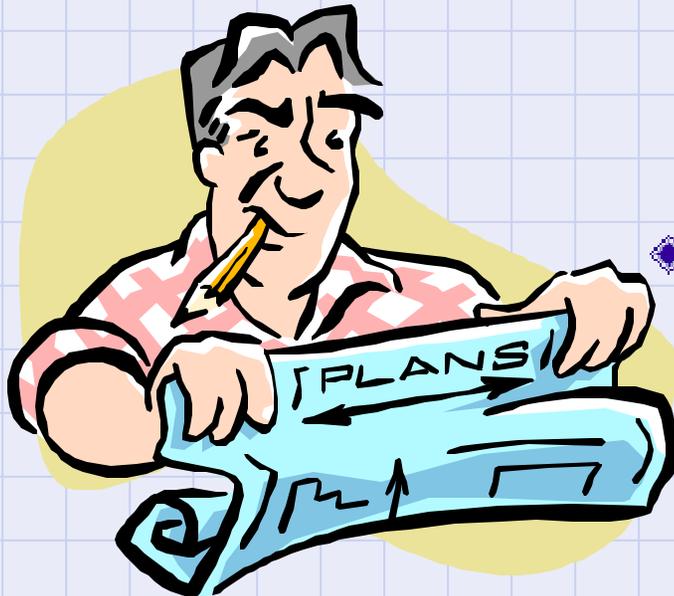
Plan It!



Phase 1: Vision

◆ Create the Solution Acquisition Plan

- ◆ What is a Solution Acquisition Plan?
 - Estimates the work needed to complete the acquisition
- ◆ What's available to help me?
 - The Solution Acquisition Planning Process Guide
 - The Acquisition Planning Estimating Worksheet





Phase 1: Vision

◆ Develop the Work Breakdown Structure (WBS)

◆ What's in a Work Plan?

- Necessary Tasks
- Level of effort
- Cost
- Schedule

◆ What's available to help me?

- Solution Acquisition Project Management (SAPM) Process Guide



Plan It!



Phase 1: Vision

- ◆ The Security Vision Phase checklist
 - ◆ What is a Security Checklist?
 - Each phase of the SLC contains a security checklist which needs to be completed
 - A FSA system's security officer will be assigned to perform system security checks
 - ◆ What's available to help me?
 - SLC System Security Process Guide
 - Security Vision Phase Checklist



Plan It!



Phase 1: Vision

◆ Begin Project Management Activities

◆ What types of management activities?

- Status Reporting
- Risk and Issue Tracking
- WBS and SAP management

◆ What's available to help me?

- SAPM Process Guide
- Project Management templates



Plan It!



Phase 1: Vision

◆ A Quick Review:

What we talked about...

- High Level Requirements
- Business Case
- Task Order/SoO
- IPT
- Solution Acquisition Plan (SAP)
- Work Breakdown Structure
- Project Management Activities
- Security Vision Phase Checklist

◆ Additional recommended activities include:

- Status reports
- Risk & Issue Tracking
- RDM Plan
- Quality Assurance Plan
- Configuration Management Plan
- TTS Plan

The Definition Phase



Design It!

Phase 2: Definition

Design It!



◆ Purpose of the Definition Phase

- Develop solution requirements
- Develop and accept a preliminary design for the solution



Phase 2: Definition

Design It!



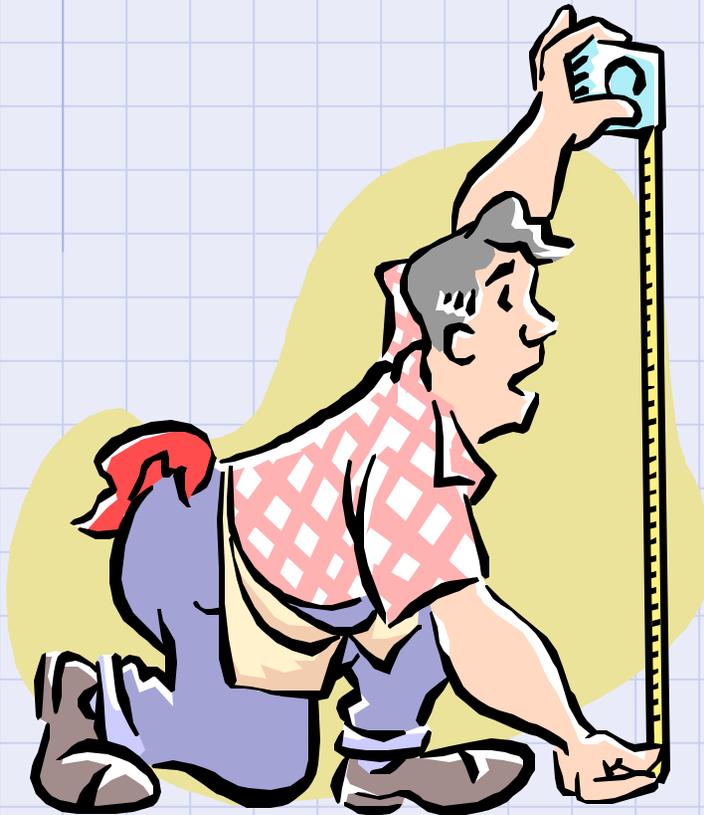
◆ Create and Approve Low Level Requirements

◆ What are low level requirements?

- High level requirements broken into specific testable requirements
- Low level requirements are mapped to high level requirements to ensure we meet and achieve the overall objective

◆ What's available to help me?

- The Requirements Development and Management Process Guide
- The Requirements Traceability Matrix



Phase 2: Definition

Design It!



◆ Develop and Document the Preliminary Design

- ◆ What is the preliminary design?
 - Reflects the functional solution of what will be delivered
 - Often, the design visually depicts the solution through graphic models, process flows, or block diagrams
- ◆ What's available to help me?
 - Preliminary Design Sample



Phase 2: Definition

Design It!



◆ Create a Configuration Management Plan

◆ What is Configuration Management?

- The process for identifying, managing, and tracking all solution components throughout the project
- Plan is approved by the Project Manager

◆ What's available to help me?

- The Configuration Management Process Guide
- Configuration Item Index and Configuration Library Samples



Phase 2: Definition

Design It!



◆ Document and Approve a Quality Assurance Plan

- ◆ What is a Quality Assurance Plan?
 - A plan describing when and how quality reviews will be performed throughout the project.
- ◆ What's available to help me?
 - Quality Assurance Process Guide
 - Quality Assurance Plan Template
 - Independent Verification and Validation (I V&V) Handbook



Phase 2: Definition

Design It!



◆ Document and Approve a Transition to Support Plan



◆ What is Transition to Support?

- Identification of the organization that has on-going responsibility for the support and maintenance of the solution after deployment
- Transfer of on-going responsibility to the support organization

◆ What's available to help me?

- Transition to Support Process Guide
- Transition to Support Plan Template

Design It!



Phase 2: Definition

◆ The Security Definition Phase Checklist

- ◆ What is a Security Phase Checklist?
 - A list of all security related activities for that phase
 - In the definition phase, a system security officer ensures the solution requirements and Preliminary Design meet security requirements.

- ◆ What's available to help me?
 - SLC System Security Process Guide
 - Security Definition Phase Checklist



Design It!



Phase 2: Definition

◆ A Quick Review:

What we talked about...

- Low Level Requirements
- Preliminary Design
- Configuration Management Plan
- Quality Assurance
- Transition to Support (TTS)
- Security Definition Phase Checklist

◆ Additional recommended activities include:

- Status reports
- Risk & Issue Tracking
- Business Case Updated
- Transition to Support Plan
- Requirements Development & Management Plan

The Construction Phase



Build It!

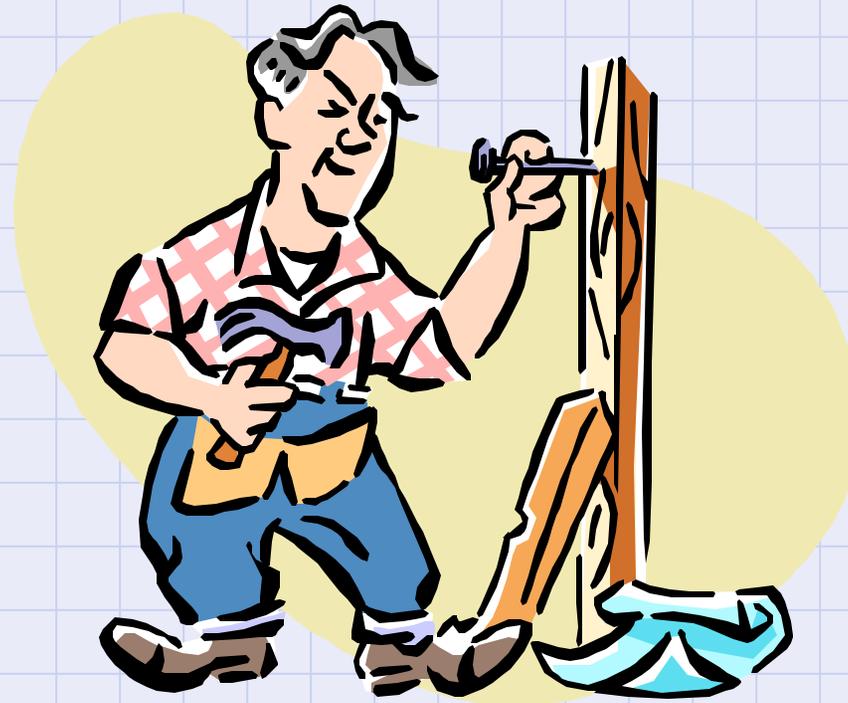
Phase 3: Construction

Build It!



◆ Purpose of the Construction Phase

- Develop the Detailed Design
- Build and Accept a Solution



Phase 3: Construction

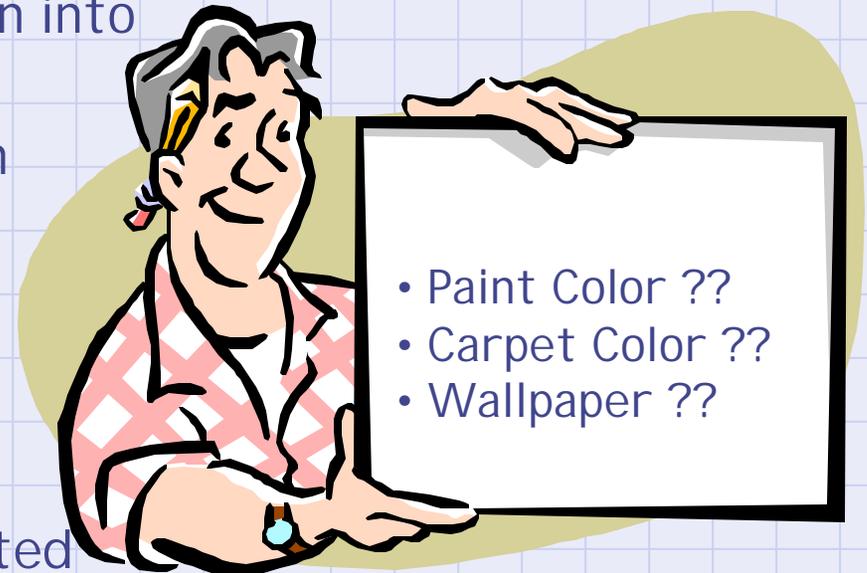
Build It!



◆ Develop and Approve the Detailed Design

◆ What is the Detailed Design?

- Refines the Preliminary Design into a Detailed Design
- Physically depicts the solution through architecture, design, database schemas and report prototypes
- Contains specific information enabling the solution to be thoroughly developed and tested



◆ What's available to help me?

- Detailed Design Document Samples
- FSA CIO Technology Handbook

Phase 3: Construction

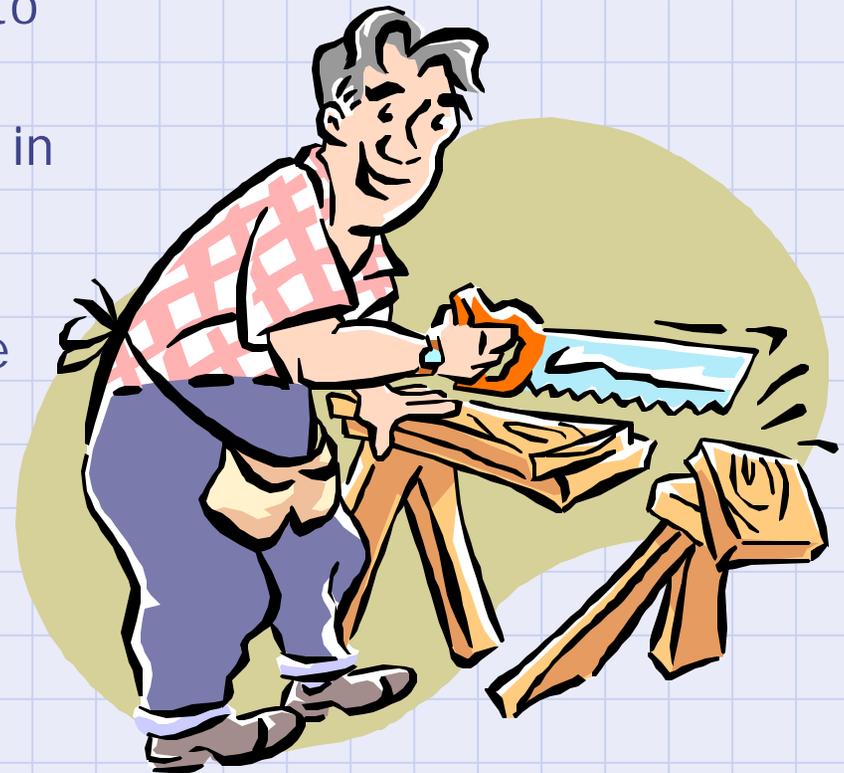
Build It!



◆ Build the Solution

- ◆ How is a solution built?
 - By transforming the design into the solution
 - In a development environment in preparation for testing
 - Some solutions are purchased off the shelf and some may be purchased services

- ◆ What's available to help me?
 - FSA CIO Information Technology Handbook

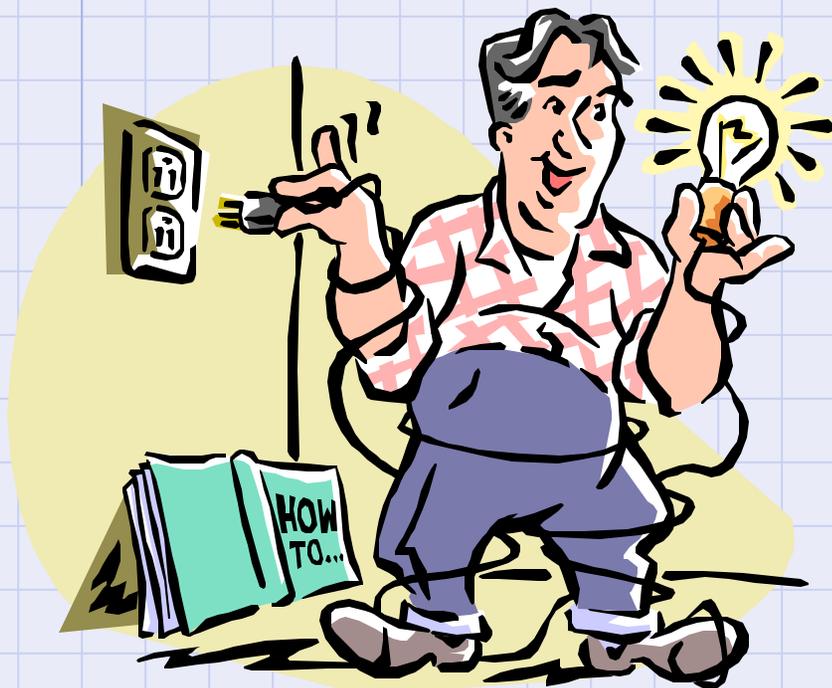


Phase 3: Construction

Build It!



◆ Test the Solution



- ◆ What is involved in testing?
 - Developed test plans are executed
 - Tests are performed to ensure the solution satisfies the defined functional, technical, physical and quality requirements

- ◆ What is available to help me?
 - FSA System Integration and Testing Process Handbook
 - FSA CIO IT Handbook

Build It!



Phase 3: Construction

◆ The Security Construction Phase checklist

◆ What are the security components in this phase?

- The Construction Phase contains numerous security activities.
- Some activities include:
 - Security Risk Assessment
 - System Security Plan
 - Access and Clearance Forms Completed

◆ What's available to help me?

- SLC System Security Process Guide
- Security Construction Phase Checklist



Phase 3: Construction

Build It!



◆ Conduct Production Readiness Review (PRR)

◆ What is a PRR?

- An official sign-off of the solution's readiness
- Reviews are conducted to ensure performance, security and quality standards are achieved
- Assesses the readiness of the solution for deployment

◆ What's available to help me?

- PRR Checklist
- PRR Procedures Guide



Build It!



Phase 3: Construction

◆ A Quick Review:

What we talked about...

- Detailed Design
- Test Plans/Tested Solution
- Product Readiness Review
- Build the Solution
- Test the Solution
- Security Definition Phase Checklist

◆ Additional recommended activities include:

- Status reports
- Risk & Issue Tracking
- Security Risk Assessment
- QA Reviews
- Configuration Management Activities
- Transition to Support Plan Updated
- Test Results

The Deployment Phase



Move In!

Phase 4: Deployment

Move In!



◆ Purpose of the Deployment Phase

- Deploy the developed solution into production



Phase 4: Deployment

Move In!



◆ Successful Deployment of the Solution

◆ What is Deployment?

- Configuration items are baselined
- The solution is moved into production for everyday use
- The Transition to Support Readiness Review is conducted to ensure support readiness activities are complete

◆ What's available to help me?

- CM Process Guide
- Transition to Support Process Guide



Phase 4: Deployment

Move In!



◆ The Security Deployment Phase Checklist

- ◆ What are the security activities conducted in this phase?
 - A documented plan is approved for maintaining security
 - Security Controls are tested
 - All System Security activities are brought to closure

- ◆ What's available to help me?
 - Security Deployment Phase Checklist
 - SLC System Security Process Guide



Phase 4: Deployment

Move In!



◆ A Quick Review:

What we talked about...

- Solution is successfully deployed
- Transition to Support Readiness Review
- Security Deployment Phase Checklist
- Configuration Item Index is baselined

◆ Additional recommended activities include:

- Project inventory list complete
- QA Reviews Documented
- Applicable Training conducted

The Support & Retirement Phase



Maintain It!

Phase 5: Support & Retirement

Maintain It!



- ◆ Purpose of the Support & Retirement Phase
 - Provide operational and maintenance support for the solution

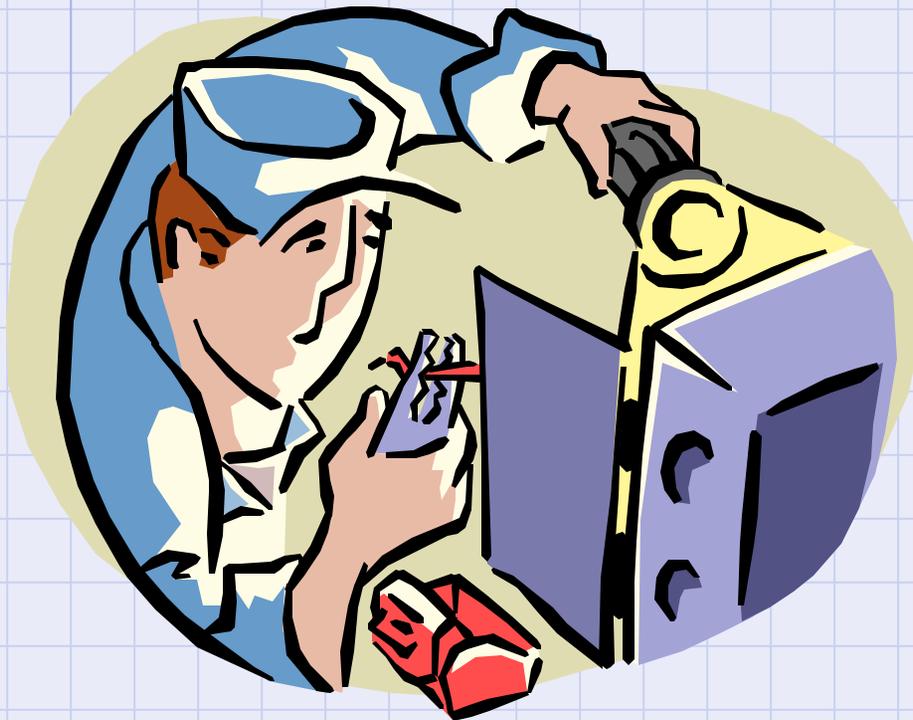


Phase 5: Support & Retirement

Maintain It!



◆ Transition the solution to the support organization



- ◆ What does transitioning the solution mean?
 - The support organization takes over primary responsibility for the solution
- ◆ What's available to help me?
 - The Transition to Support Process Guide
 - The Transition Readiness Checklist

Phase 5: Support & Retirement

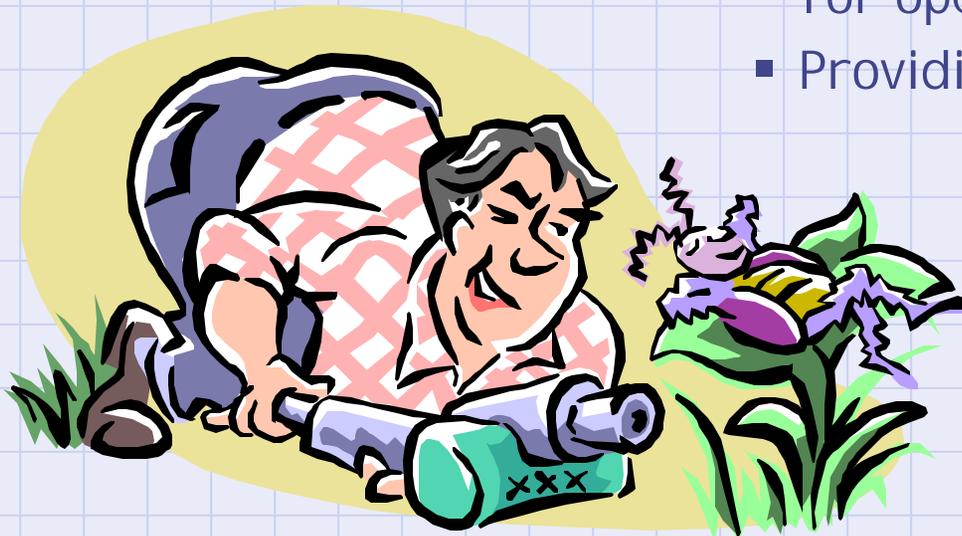
Maintain It!



◆ Perform Operations and Maintenance

◆ What does Operations and Maintenance mean?

- Continually fixing, repairing and enhancing the solution
- Ensuring operational budget is available for operating and maintaining a solution
- Providing Help Desk or other services



◆ What's available to help me?

- CM Process Guide

Phase 5: Support & Retirement

Maintain It!



- ◆ The Security Support & Retirement Phase checklist
 - ◆ What are the on-going security activities?
 - Several security activities and documents should be maintained in this phase
 - The System Security Plan should be continually reviewed and updated as the system undergoes major changes
 - ◆ What's available to help me?
 - SLC System Security Process Guide
 - Security Support Phase checklist



Phase 5: Support & Retirement

Maintain It!



◆ A Quick Review:

What we talked about...

- Transition to Support
 - Operations and Maintenance
 - SLC Security Support & Retirement Phase Checklist
-
- ◆ The Support & Retirement Phase will continue until the system is retired or until a new solution is envisioned and the life cycle begins again



What's Left?

A Completed Dream house...



Plan It!
Vision



Design It!
Definition



Build It!
Construction



Move In!
Deployment



Maintain It!
Support &
Retirement



Where can I get my copy?

- ◆ Intranet <http://sfanet/cio>
- ◆ Extranet <https://extranet.sfa.ed.gov/cio>



Where can I get more information?



◆ Contact ECAD SLC Team:

- Lana Gourdine – 377-3535
Lana.Gourdine@ed.gov

